We Claim:

1. A power transistor having at least one trench transistor cell in a semiconductor body, comprising:

a drain zone, a drift zone, a channel zone, and a source zone formed in each case successively and substantially horizontally in the semiconductor body;

the semiconductor body having a trench formed therein with a base and a defined body height opposite a pn junction between said drift zone and said channel zone;

a first dielectric layer cladding said trench substantially to said body height, and a gate oxide cladding said trench between said body zone and a semiconductor body surface; and

a field electrode extending in said trench substantially from said trench base to an upper edge of said first dielectric layer;

a gate electrode disposed substantially between said body height and the semiconductor body surface, said gate electrode having a lower edge with a profile at least partly different from horizontal; and

a second dielectric layer formed between said gate electrode and said field electrode.

2.   The power transistor according to claim 1, wherein said profile of said lower edge of said gate electrode is at least partly angled relative to the semiconductor body surface.

3.   The power transistor according to claim 2, wherein said profile has a falling angle between two trenches.

4.   The power transistor according to claim 1, wherein said profile of said lower edge of said gate electrode is formed with at least one outward bulge.

5.   The power transistor according to claim 1, wherein said field electrode overlaps said gate electrode.

6.   The power transistor according to claim 5, wherein at least one of said field electrode and said gate electrode intersects and/or passes through a plane defined by said pn junction between said drift zone and said channel zone.

7.   The power transistor according to claim 1, wherein said field electrode is connected to be at a fixed potential.

8.   The power transistor according to claim 7, wherein said field electrode is connected to be at the source potential.